COURSE SYLLABUS: PTRT 1301-0007 – Overview of Petroleum Industry
LOCATION: HCC, North Forest Campus, 6010 Little York Road, Houston 77016; Room 125
CLASS DATES: February 17, 2017 to May 12, 2017
CRN SECTION: 12128
CREDIT HOURS: 3.00
CLASS TIME: Friday 230pm-500pm

HCC (Northeast Campus) Mission Statement:

Houston Community College will be the most **relevant** community college in the country. We will be the **opportunity** institution for every student we serve – **essential** to our community's success.

WELCOME:

We welcome each of you to a semester of comprehensive study based upon an industry view of the oil and gas industry. With participation, each student will exit this course with a more expanded view of this industry than when they first entered. Technical review and class participation in all of its aspects is the key and that is what will be expected.

Course Description: An overview of the petroleum industry will be studied from the engineering technician perspective. The current knowledge and technical aspects of the oil and gas industry will be taught with regard to the various operational functionalities as outlined in the course content.

Prerequisites: None

Learning Objectives: Upon completion of this course, students will be able to describe the following engineering practices in the petroleum industry – roles and responsibilities, geology, reservoir engineering, drilling engineering, facilities engineering, well operations, refineries, transportation, global reserves and production, data management. Students will be able to speak more responsibly about the oil and gas industry.

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Instructor Information:

Instructor: Thomas (Tom) Lane
Phone Number: 830-832-6018 (cell)
Email: Thomas.Lane@hccs.edu

Course schedule: Fridays 230pm - 500pm, Rm 125
Office Hours: NE Campus, Coldwell Building, Mon-Fri 11-12pm (call /email me to meet)

Instructors Biography: Petroleum Engineer, ExxonMobil, 1976-2015
HCC Professor, 2015-present

Education: B.S Mechanical Engineering, SMU, Dallas, Texas

TEXTBOOK'S INFORMATION: **The Oil and Gas Industry, a Nontechnical Guide, Joseph Hilyard, Penn Well, 2012**
ISBN-13: 978-1-59370-254-0. Cost $ 60 at amazon.com

Class instruction will be from the textbook. Homework and tests will be from the textbook. Tests are open book.

Lab Requirements: No lab.

Students with Disabilities: "Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty is authorized to provide only the accommodations requested by the Disability Support

Services Office." For questions, contact Donna Price at 713-718-5165 or the Disability Counselor at each college. Also visit the ADA web site at: http://www.hccs.edu/students/disability/index.htm. Faculty Handbook/Faculty Orientation is also available at http://www.hccs.edu/students/disability/faculty.htm.

TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, 20 U.S.C. A§ 1681 ET. SEQ.

Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' rights with regard to sex/gender discrimination. Information regarding these rights are on the HCC website under Students-Anti-discrimination. Students who are pregnant and require accommodations should contact any of the ADA Counselors for assistance.

It is important that every student understands and conforms to respectful behavior while at HCC. Sexual misconduct is not allowed and will be addressed promptly. Know your rights and how to avoid these difficult situations. HCC Office of Institutional Equity is responsible. Contact them at 713-718-8271.

METHOD OF INSTRUCTION:

A lecture format is used and slides and handouts will supplement the material where needed. A class discussion of key concepts will be employed so that the student will be able to obtain a basic understanding of how information is utilized in the oil and gas industry. Students are encouraged to ask questions and will be expected to participate in class. It is therefore important for each student to read the assignments and come prepared to participate. If you miss a class, you will be responsible to getting the information missed. Material will be available on the HCC Learning Web

CLASS POLICIES:

Academic Honesty:

All HCC rules, policies, and regulations apply as they are described in the 2007 HCC Student Handbook.

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Attendance and Withdrawal Policies:

All students are required to be present during class sessions. Students must communicate with the instructor in cases they need to be absent from a class period. Withdrawal policies apply as they are described in the HCC policy, rules, and regulations in the HCC Student Handbook and College

Course Requirements and Grading Policy:

All students are expected to be on time for class and to participate during lectures in the course.

Letter Grade	Test/Project Score
A	**90-100**
B	**80-89**
C	**70-79**
D	**60-69**
F	**0-59**

Testing:

Each test and presentation will have a score of 100 points. Students should take each exam on time so they have time to complete it. **Tests** – there will be 9 tests and 1 final test, for a total of 10 tests. The average score of these 10 tests will be 70% of the final grade. All tests are open book. **Technical Presentations** – each student will make 3 presentations to the class and the average score will count 30% of the final grade. No grades are dropped. Tests or presentations not done are given a "0" score. Since there are only 11 class sessions, this course has 18 hours of e-instruction for time outside of class preparing presentations and reading textbook.

Make-Up Policy:

Make-up tests will be allowed but must be turned in at the next class. Completed tests can be emailed back. Taking photo of page is okay

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Student Survey:

Evaluation for Greater Learning Student Survey System

HCC believes that thoughtful student feedback is necessary to improve teaching & learning. During a designated time in class, you will be asked to answer a short online survey related to instruction. The anonymous results of the survey will be made available to the Division Chair.

Course Content:

Text Book

- Origins of oil and gas
- Oil and gas production overview
- Searching for oil and gas
- Drilling and completions
- Managing production
- Transporting and processing oil and gas
- Petroleum Industry, Trading & Challenges

Class Schedule (11 sessions)

Feb 17:	First day of Class: Class Overview and Orientation, Review of Class Syllabus. Cover Chapter 1 and 2. **Test # 1**
Feb 24:	Chapter 3. **Test # 2** on Chap 3 will be posted online to take and return. No class meeting at North Forest
Mar 3:	Chap 4. **Test # 3. Presentation # 1**
Mar 10:	Chap 5-6. **Test # 4**
Mar 17:	No class, Spring break

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Mar 24:	Chap 7. **Test # 5. Presentation # 2**
Mar 31:	Chap 8. **Test # 6**
Apr 7:	Chap 9-10. **Test # 7. Presentation # 3**
Apr 14:	Holiday, no class
Apr 21:	Chap 11-12**. Test # 8**
Apr 28:	Chap 13, 14 & 15. **Test # 9**
May 5:	**Final Test # 10. Can take Final on May 5 or May 12**
May 12:	**Final Test # 10**

OTHER STUDENT INFORMATION (CLUBS, TUTORING, WEB RESOURCES, ETC.)

Students are encouraged to join the SPE, Society of Petroleum Engineers Gulf Coast Section. Additional help and support is available upon request. Class trips may be scheduled at industry sites to further hands-on application. Students will be notified in advance.

Students are encouraged to visit informative sites of:

- The American Chemical Society
- The American Institute of Chemical Engineers
- The Center for the Advancement of Process Technology
- The Gulf Coast Process Technology Alliance

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The American Chemical Society Students Affiliates Section

Technical Presentations (students choose their topic):

Any topic in textbook of interest to student

Any current event, in USA or Globally, related to oil and gas industry

Role of drilling, reservoir engineer in drill well planning

Role of facility engineer in managing surface equipment

Describe how well tests are done and the value of the data

Describe advantages and disadvantages of water injection and gas injection

Visit Contractor web sites (Halliburton, Schlumberger, Baker, Weatherford, Well Tec) to see downhole tools and technology available to reservoir, drilling and wellwork engineers

Production data management.

Safety Hazards

Technical Presentation Format (Power Point preferred, WORD is fine, verbal is okay):

I. Title Page, date, name

II. Describe the issue or objectives

III. Discuss the advantages, disadvantages, or alternative options

IV. Discuss your summary, conclusion or recommendation

V. References used